

**REMARKS-General**

1. The newly drafted independent claims 24 and 36 incorporate all structural limitations of the original claims 1 and 20 and include further limitations previously brought forth in the disclosure. No new matter has been included. All new claims 24-43 are submitted to be of sufficient clarity and detail to enable a person of average skill in the art to make and use the instant invention, so as to be pursuant to 35 USC 112.

**Regarding to Rejection of Claims 1-2, 5, 9, 11, 17, and 20-21 under 35USC102**

2. The Examiner rejected claims 1-2, 5, 9, 11, 17 and 20-21 as being anticipated by Kuroki et al (US Publication No. 2005/0240307). Pursuant to 35 U.S.C. 102, "a person shall be entitled to a patent unless:

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language."

3. In view of 35 U.S.C. 102(e), it is apparent that a person shall not be entitled to a patent when his or her invention was described in an application patent which is published under section 122(b) by another filed in the United States before the invention by the applicant for patent.

4. However, the Kuroki application and the instant invention are not the same invention according to the fact that the independent claim 24 or 36 of the instant invention does not read upon the Kuroki application. Apparently, Kuroki fails to teach and anticipate the distinctive features of the instant invention as follows:

(a) In claims 24 and 36, "a controller is set between a learn mode and a play mode" is claimed to programmably control the mechanical movement of the output shaft, wherein Kuroki merely teaches a robot device including a movement controlling

device capable of making, based on a ZMP as a posture-stability criterion, a control for stabilization of the robot posture in moving without any mention of setting the robot device between any learn mode or play mode.

(b) In claims 24 and 36, "the controller learns the mechanical movement of the output shaft by manually moving the output shaft from the initial position to the final position and memorizing the output shaft from the initial position to the final position" is claimed to set the controller at the learn mode, wherein Kuroki merely teaches, in Fig. 7 and from paragraph 0164 to 0177, how to create the movement of the robot for a stable walk including the steps of setting the foot movement, calculating a ZMP stable region, setting a ZMP trajectory for the foot movement, setting an adjustment of the trajectory, putting a movement pattern for each group of the robot points into the posture stabilizing operating, setting a moment compensation amount, and providing target trajectories. It is apparent that Kuroki fails to teach and anticipate the controller learns the mechanical movement of the output shaft when the output shaft is manually moved from one position to another position. In other words, the user is able to set the controller at the learn mode and to manually move the output shaft via a movable part of the motorized toy and domestic appliance from the initial position to the final position such that the controller will learn the mechanical movement of the output shaft. Therefore, Kuroki fails to teach the learning process of the instant invention.

(c) In claims 24 and 36, "the mechanical movement of the output shaft is memorized" is claimed after the controller learns the mechanical movement, wherein Kuroki merely teaches the motion data, including ZMP as the posture-stability criterion, is input into the robot. In fact, the sensor system of Kuroki is capable of well controlling the robot movement by identifying an unknown external force moment and unknown external force using a ZMP equation introduced based on measured values from sensors provided at various points on the robot. Therefore, there is no learning process for the robot of Kuroki.

(d) In claims 24 and 36, "the output shaft is moved back to its initial position" is claimed at the play mode, wherein Kuroki is silent regarding the setting of the output shaft. The applicant respectfully submits since the output shaft is manually moved from the initial position to the final position, the output shaft must be moved back to its initial

position either by the user manually moving the output shaft or by the controller automatically moving the output shaft.

(e) In claims 24 and 36, “the controller is set at the play mode to reproduce the mechanical movement of the output shaft” is claimed to automatically move the output shaft from the initial position to the final position, wherein Kuroki merely teaches the robot moves in responsive to the input motion data. In other words, Kuroki fails to teach the robot reproduces the movement. The applicant respectfully submits that “the output shaft reproduces the movement” means that the output shaft repeats the movement in responsive to the movement at the learn mode. Therefore, the robot of Kuroki merely produces the movement but not reproduces any movement.

5. Accordingly, Kuroki fails to teach and anticipate the above distinctive features (a) to (e) as claimed in the independent claims 24 and 36. Kuroki is not a qualified prior art of the instant invention and should be removed from the prior art list of the instant invention.

#### **Response to Rejection of Claims 3-4, 6-8, 10, 12-16, 18-19, and 22-23 under 35USC103**

6. The Examiner rejected claims 3-4, 6-8, 10, 12-16, 18-19, and 22-23 over Kuroki in view of no other cited art. Pursuant to 35 U.S.C. 103:

“(a) A patent may not be obtained thought the invention is **not identically** disclosed or described as set forth in **section 102 of this title**, if the **differences** between the subject matter sought to be patented and the prior art are such that the **subject matter as a whole would have been obvious** at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.”

7. In view of 35 U.S.C. 103(a), it is apparent that to be qualified as a prior art under 35USC103(a), the prior art must be cited under 35USC102(a)~(g) but the disclosure of the prior art and the invention are not identical and there are one or more differences between the subject matter sought to be patented and the prior art. In addition, such differences between the subject matter sought to be patented **as a whole** and the prior

art are obvious at the time the invention was made to a person having ordinary skill in the art to which the subject matter pertains.

8. In other words, the differences between the subject matter sought to be patent as a whole of the instant invention and Kuroki which is qualified as prior art of the instant invention under 35USC102(e) are obvious at the time the invention was made to a person having ordinary skill in the art to which the subject matter pertains.

9. However, as recited above, Kuroki merely discloses a robot including a movement controlling device capable of making, based on a ZMP as a posture-stability criterion, a control for stabilization of the robot posture in moving without any mention of setting the robot device between any learn mode or play mode. Kuroki merely teaches the motion data is input to control the movement of the robot without any mention of how to manually move the output shaft for the controller to learn the movement of the output shaft. Kuroki merely teaches the robot produces a movement in responsive to the calculated motion data without any mention of any movement reproduced in responsive to the movement learned at the learn mode.

10. The applicant respectfully submits that in order to determine whether the differences between the subject matters sought to be patent as a whole of the instant invention and the primary prior art, Kuroki, are obvious, we have to identify all the differences between the claims of the instant inventions and Kuroki.

11. Accordingly, the difference between Kuroki and the instant invention as claimed in claims 24 to 43 is not limited to the disclosure of "mechanical movement of a robot", but includes the above distinctive features (a) to (e). In addition, regarding to claims 24 to 43, the instant invention further contains the following distinctive features:

(f) Kuroki fails to teach the mechanical movement of the output shaft is a rotational movement thereof as claimed in claim 25 in addition to what is claimed in claim 24 as a whole. The applicant respectfully submits that the controller learns the rotational movement of the output shaft by manually rotating the output shaft at the learn mode and reproduces the rotational movement of the output shaft at the play mode. Kuroki merely teaches the movement of the robot is controlled by the input motion data.

(g) Kuroki is silent regarding how to memorize an angular movement of the output shaft as the mechanical movement thereof from the initial position to the final position as claimed in claims 26 to 27 and 37 in addition to what is claimed in claims 24 and 36 as a whole. The applicant respectfully submits that in order to memorize the angular movement of the output shaft, the user must manually move the output shaft from the initial position to the final position. However, Kuroki fails to teach such concept.

(h) Kuroki fails to teach and suggest how to convert the mechanical movement of the output shaft in an analog form into a digital form to be memorized as claimed in claims 28 to 29 and 40 to 41 in addition to what is claimed in claims 24 and 36 as a whole. Kuroki merely shows, in paragraph 0279, a sequential addition, in the joint actuator at each control point, of a translation force term applied to the control point, translation force terminal applied due to a moment about a ZMP, and an external force term. The applicant respectfully submits the analog form mechanical movement is produced by manually moving the output shaft at the learn mode and is converted into the digital form mechanical movement to be memorized. The configuration of analog/digital conversion of the instant invention is totally different from that of Kuroki.

(i) Kuroki fails to teach and suggest how to reset the controller at the learn mode to overwrite the mechanical movement of the output shaft being memorized as claimed in claims 30 to 32 in addition to what is claimed in claim 24 as a whole. Kuroki merely teaches the motion data is input to control the movement of the robot without any mention of resetting the robot at the learn mode to overwrite the motion data. The applicant respectfully submits that when the user resets the controller at the learn mode, the user is able to manually move the output shaft as a new set of mechanical movement to overwrite the old set of mechanical movement.

(j) Kuroki is silent regarding how to repeatedly reproduce the mechanical movement of the output shaft learned at the learn mode as claimed in claims 33 to 35 and 42 to 43 in addition to what is claimed in claims 24 and 36 as a whole. The applicant respectfully submits that the controller learns the mechanical movement by manually moving the output shaft at the learn mode such that the controller is adapted to repeatedly reproduce the mechanical movement of the output shaft at the play mode until the controller is reset. Accordingly, Kuroki fails to teach and suggest the whole concept.

(k) Kuroki is silent regarding the motor assembly, which is a servomotor assembly, comprising a DC motor and a rotary sensor detecting an angular position of the output shaft as claimed in claims 38 to 39 in addition to what is claimed in claim 36 as a whole. Kuroki merely teaches, in paragraph 0113, a small AC servo actuator having a servo control system to provide degrees of freedom of the legged locomotion robot without any mention of manually moving the output shaft and detecting an angular position of the output shaft to be memorized at the learn mode.

12. The applicant respectfully submits that the invention must be considered as a whole and there must be something in the reference that suggests the combination or the modification. See Lindemann Maschinenfabrik GMBH v. American Hoist & Derrick, 221 U.S.P.Q. 481, 488 (Fed. Cir. 1984) ("The claimed invention must be considered as a whole, and the question is whether there is something in the prior art as a whole to suggest the desirability, and thus the obviousness, of making the combination"), In re Gordon, 221 U.S.P.Q. 1125, 1127 (Fed. Cir. 1984), ("The mere fact that the prior art could be so modified would not have made the modification obvious unless the prior art suggested the desirability of the modification.") In re Laskowski, 10 U.S.P.Q.2d 1397, 1398 (Fed. Cir. 1989), ("Although the Commissioner suggests that [the structure in the primary prior art reference] could readily be modified to form the [claimed] structure, "[t]he mere fact that the prior art could be modified would not have made the modification obvious unless the prior art suggested the desirability of the modification.")

13. In the present case, there is no such suggestion. Kuroki fails to suggest the above distinctive features (a) to (k) as claimed in the instant invention.

14. Applicant believes that for all of the foregoing reasons, all of the claims are in condition for allowance and such action is respectfully requested.

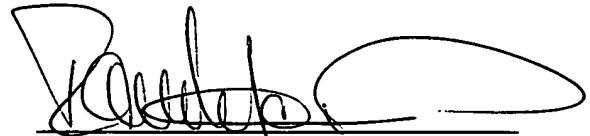
#### **The Cited but Non-Applied References**

15. The cited but not relied upon references have been studied and are greatly appreciated, but are deemed to be less relevant than the relied upon references.

16. In view of the above, it is submitted that the claims are in condition for allowance. Reconsideration and withdrawal of the objection are requested. Allowance of claims 24 to 43 at an early date is solicited.

17. Should the Examiner believe that anything further is needed in order to place the application in condition for allowance, he is requested to contact the undersigned at the telephone number listed below.

Respectfully submitted,




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